

Claim 50 and dependent claims 51-54 have been added and are directed to a last for making an item of footwear and also includes, *inter alia*, the recitation that the footwear is formed in a series of operations.

Hardy, on the other hand, relates to "string-lasting" of a shoe upper (11) to a last (L). That is, the upper (11) is essentially fully formed separate from the metal last (L) – as shown in Fig. 2 and Fig. 3 – and then is simply placed on the last with a drawstring (23) which is used to pull the upper snugly around the metal last (L) in a single operation (See column 2, lines 6–11 and column 5, lines 70 – 73). This type of lasting is only possible with uppers formed from very light-weight materials or fabrics, such as very fine supple leather or canvas. String-lasting is not at all suitable for more heavy-duty materials, such as thick leather, which is typical of more robust footwear such as boots and more durable shoes. The uppers for more robust footwear need to be progressively formed on a forming last in a series of operations to, for example, impart the correct shape to the upper, insert or bond or shape a toe-protector element, attach an insole, etc. and claim 21 is amended to make this distinction more clear. The string lasting technique described in Hardy is typical of shoes with a light-weight upper material that does not require multiple forming operations. Therefore Hardy does not teach forming footwear on a forming last in a series of operations, as now claimed in claim 21 and claim 50.

Furthermore, the Hardy patent is particularly concerned with the fabrication of shoes without any insole or base to the upper. As stated at column 2, lines 8–11, "*the upper being lasted by the use of a drawstring place along the edge of its lasting margin so as to leave substantially the entire bottom of the last exposed*". This is required with the Hardy invention in order to transfer sufficient heat from the last to the sole blank (S). For example, at column 6, lines 44–50, Hardy states "*the foregoing difficulties have been overcome in accordance with the practice of the present invention by supplying heat directly to the inner surface of the uncured sole blank by making sure that the heated metal surface of the bottom of the last or some part thereof has direct contact with a substantial area of the inner surface of the sole*".

And even if Hardy does mention the potential application of his moulding machine to an upper having an insole, there is absolutely no teaching or suggestion by Hardy of forming an upper having an insole on the metal last (L) in a series of operations as now claimed. It is far more likely that any upper having an insole would have been formed separately according to the

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known prior art technique, and then the pre-formed upper physically transferred to the heated last (L) as described of the prior art at page 2, lines 19-22, of the present application. By contrast, as now claimed, the present invention is concerned with a method of making shoes and boots which includes forming the upper on the last in a series of operations – including, for example, providing the upper with a base (ie. an insole) to which the moulded rubber sole is to be attached (as recited in new claim 41). This provision of an insole is typical for higher quality and more robust footwear.

In addition, the method of the present invention also involves the step of actually mounting the forming last on the apparatus for moulding the rubber sole. In contrast, the heated last (L) in the Hardy patent is for all intents and purposes *permanently* mounted on the moulding machine. Although the last (L) in Hardy is shown on a threaded shaft and is therefore conceivably removable (eg for service or repair), the nuts (44, 46) on the threaded shaft are merely described as being able to be loosened to adjust the height or angular position of the last (L) and it is not intended in the ordinary use of that machine that the last be removed. In fact, it doesn't *need* to be removed, because the upper is actually formed *separate* from the last (as mentioned above) and then transferred to the heated metal last (L) at the moulding assembly to be string-lasted in a single operation.

In contrast, the forming last of the present invention is designed to ordinarily be removable from the apparatus with the moulding assembly to facilitate both formation of the footwear upper and removal of the finished shoe or boot after the moulding step is completed. This is clear from the demountable last shown and described with reference to Fig 3 of the present application, which connects to the moulding apparatus via a bayonet-type coupling. Furthermore, the toe and heel portions of the inventive last are separable to facilitate removal of a finished shoe or boot, and this is typically performed separate from the moulding apparatus.

Accordingly, the rejection of claim 21 should be withdrawn.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 22-23 are rejected as being unpatentable over U.S. Patent No. 2,878,523 (“Hardy”), in view of U.S. Patent No. 5,955,017 (“Foffano et al.”). Without acceding to the propriety of the rejection, claims 22 and 23 depend on claim 21, and are patentable for at least

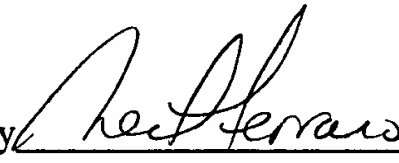
the same reasons as claim 21, as discussed above. Therefore the rejection of claims 22 and 23 should be withdrawn. Claims 41-49 also depend from claim 21 and are also believed to be allowable.

Conclusion

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,

By 
Neil P. Ferraro, Reg. No. 39,188
Attorneys for Applicant(s)
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210-2211
Tel. no. (617) 720-3500

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MARKED-UP SPECIFICATION

On page 1, starting at line 25 please rewrite the paragraph as follows.

During the production process the upper is typically formed around a forming last in a first manufacturing step and then the sole is injection moulded onto a base insole of the upper in a second manufacturing step. The forming last provides a template for the three-dimensional size and shape of the upper. Accordingly, the first step involves mainly shaping and stitching operations. As there is generally no heating involved in this step the last can be made from a variety of materials. Wood and metal have traditional been used, and more recently plastic. Plastic is particularly preferred in lasts today because it is easy to form into the desired shape and is also relatively inexpensive.

On page 3, starting at line 27 please rewrite the paragraph as follows.

Desirably, the step of heating the forming last before and/or during the moulding step is by means of a heating device located within the body. [Alternatively, the heating means may be in the form of a radiant heater spaced away from the last.]

On page 7, starting at line 29 please rewrite the paragraph as follows.

Returning to Fig. 1, the apparatus (1) broadly includes a plurality of lasts (5) mounted in spaced apart relation around the periphery of a turntable (6). A number of stationary workstations (7) complementary to the number of lasts (5) are positioned radially outward of and adjacent to the turntable (6). The lasts (5) move with the turntable sequentially through each of the workstations (7) as the turntable (6) is rotated. The sole of the [A] shoe (2) is progressively formed in discrete fabrication steps on each last (5) as the lasts move sequentially through the separate workstations (7).

On page 9, starting at line 20 please rewrite the paragraph as follows.

The formation or manufacture of an upper (3) for an item of footwear typically involves cutting, shaping, and stitching of a flexible material, such as real or imitation leather, around the body (8) of the forming last (5). The formation of the upper (3) takes place predominantly at room temperature and occurs throughout a series of separate operations [at several workstations]. Once the shoe upper (3) is completed, the last (5) with the formed upper thereon, is mounted on the apparatus (1) and is moved to a workstation (20) specifically designed for injection moulding of a rubber sole (4) onto the upper.

On page 12, starting at line 9 please rewrite the paragraph as follows.

In the first step the outsole (4a) is moulded with the dummy last (28) in position in the mould cavity (22). In the second step the mid-sole is formed with the last (5) and the shoe upper (3) in the mould cavity. It is the second step therefore which physically attaches the rubber sole (4) to the fabric base insole of the upper (3).

On page 12, starting at line 15 please rewrite the paragraph as follows.

A major advantage of the method described above is that the lasted upper (3) does not need to be transferred from a last for forming the upper to a vulcanising last designed for the moulding process. Accordingly, the manufacturing process is substantially [in] more streamlined, more efficient and cheaper. The end product is also arguably of superior quality. In the very competitive footwear industry, lower production cost is significant.

MARKED-UP CLAIMS

21. (Amended) A method of making an item of footwear, the method comprising [such as a shoe or a boot, including] the steps of:

forming an upper for the item of footwear on a forming last, the forming last including a body having the general shape of a foot around which the upper of the footwear item is [to be] formed in a series of separate operations, the last body having a base corresponding to a sole of the foot shape; [and]

mounting the last on an apparatus for moulding a rubber sole;

moving the last with the formed upper thereon to a moulding workstation of the apparatus; and

moulding a rubber sole onto the formed upper while it is still mounted on the forming last, the forming last being heated before and/or during the moulding step,

wherein the step of heating the forming last includes heating the base of the last body, whilst substantially preventing the heating of parts of the body other than the base.